





Model: 500-0100XL Geomembrane Wedge Welder

Operator's Manual

Copyright 2005 by DEMTECH Services, Inc.

All Right Reserved

Pro-Wedge XL $^{\text{TM}}$ Operator's Manual Rev A.doc



Scope of Manual:

This manual contains procedures for general unpacking, set-up, and operation of your DEMTECH Services, Inc. Pro-Wedge XL.

The text of this publication, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, storage in an information retrieval system, or otherwise, without prior written permission of DEMTECH Services, Inc.

Notice

Patents have been granted and/or patent applications are pending or are in the process of preparation on all DEMTECH Services, Inc. developments.

The material in the manual is for informational purposes only and is subject to change without notice.

DEMTECH Services, Inc. assumes no responsibility for any errors that may appear in this manual.

Printed in the USA

Manual Number: 500-0100XL, Rev A

DEMTECH Services, Inc. 6414 Capitol Avenue Diamond Springs, CA 95619 U.S.A. Telephone: (530) 621-3200 Toll Free: (888) 324-9353

Fax: (530) 621-0150 Web Site: www.demtech.com

Pro-Wedge XL ™ Operator's Manual Rev A.doc



Table of Contents

	Intro	duction11
	Safet	y Precautionsiv
Section	1	General Safety Information
	1.1	Intended Use
	1.2	Maintenance1
Section	2	Unpacking and Power Connection (Start-up)2
	2.1	Unpacking2
	2.2	Electrical Plug Connection
	2.3	Power Requirements
	2.4	Generator Recommendation
	2.5	Extension Cords
Section	3 1	Material Set-up Procedure4
	3.1	Adjustment #1 Wedge Centering4
	3.2	Adjustment #2 Wedge Forward Travel5
	3.3	Adjustment #3 Upper And Lower Contour Rollers6
	3.4	Wedge Timing6
	3.5	Re-Timing the Wedge
	3.6	Wedge Removal
Append	dix A,	Reference Figures (Material Set-Up)8-11
Append	dix B,	Electrical Schematic
Append	dix C,	, Warranty
Annena	liv D	Product Brochure 14



Safety Precautions

Safety precautions for operating personnel:

WARNING 1: Operating personnel should perform only the procedures described and recommended in this manual. Only qualified service personnel familiar with electrical shock hazards and mechanical entanglement hazards present inside the equipment should perform disassembly or corrective maintenance of the equipment.

WARNING 2: To avoid shock hazards, the equipment must be grounded with an adequate earth ground in accordance with local and national electrical codes.

WARNING 3: The locations of potentially dangerous voltages and other hazards are identified and labeled on the equipment. Be careful to observe these warnings when installing, operating, maintaining or servicing the equipment. Observe all warnings in this manual.

WARNING 4: Make sure to turn off the equipment power and remove the ~ (ac) line cord from the power outlet before attempting to service the equipment. Do not perform service unless you are qualified and trained to do so.

CAUTION 1: Observe the precautions given on the equipment and within this manual to prevent damage to the equipment.

CAUTION 2: Before connecting the equipment to its electrical power source, check that the ~ (ac) voltage, frequency and current to be supplied to the equipment are correct and match the serial plate affixed to the system.

CAUTION 3: Use proper handling and packaging procedures for Electro-Static Discharge (ESD) sensitive circuit boards. Assume that all circuit boards are sensitive to potential damage from ESD.

CAUTION 4: Unauthorized personnel should not remove from the equipment those panels or covers that are provided for protection and/or require a tool to remove.



Section 1: General Safety Information

The Pro-Wedge XL is a high voltage piece of equipment. Always disconnect the power source before performing service and maintenance to the unit. Never pull or carry welder by the power cord or electrical connection. Always keep slack in extension cord while in operation to avoid damage to the power connection. Keep hands and other body parts clear of heating wedge and elements when hot. Always use Pro-Wedge XL in a well-ventilated area when welding materials such as PVC that produce toxic fumes. Do not inhale toxic fumes when present. Do not operate near flammable materials. Do not apply flammable liquids to seam area. Allow unit to cool down for at least 5 minutes before putting back into shipping/storage case. Protect unit from exposure to direct rainfall or standing water. Never attempt to weld in standing water.

1.1. Intended Use

For additional product information please refer to the product data sheet located in Appendix C of this manual.

The Pro-Wedge XL has been manufactured according to the latest technology and current safety regulations. However, improper use or abuse may lead to hazardous conditions for the user or third party or damage to the unit.

Always have this manual handy at the location where the Pro-Wedge XL is being used so that it can be referred to quickly and easily.

The technician assigned to operate this welder must have read through and become familiar with this manual before starting work, particularly the section on safety.

Do not make changes or modifications to the Pro-Wedge XL relative to safety without contacting the manufacturer for advice.

1.2. Maintenance

Maintenance, inspection and adjustment of the Pro-Wedge XL may only be carried out by qualified personnel. Before removing or installing spare parts or performing other repair operations to the Pro-Wedge XL, consult the manufacturer for advice on proper procedures. This will help insure a safe and successful outcome. Always make sure all screw connections are tight before attempting to operate the unit after maintenance or repair. Also make sure all covers, guards, and other safety devices have been reinstalled before use.



Section 2: Unpacking, Power Connection, and Accessories

2.1. Unpacking

The Pro-Wedge XL hot wedge welder is delivered to you in a sturdy, reusable shipping/storage case. The custom foam insert protects the unit from damage during shipping and should be left in the case at all times. When the unit is out of the case, make sure the lid is closed to avoid dirt, dust and rain from getting inside. Once the Pro-Wedge XL has been removed from the case, it is ready for use except for any necessary set-up adjustments. For set-up procedure, refer to the set-up adjustment section in this manual.

2.2. Electrical Plug Connection

The Pro-Wedge XL is a duel voltage machine and is supplied with an appropriate U.S. plug-end according to the specified operating voltage per customers request at time of purchase. The supplied plug-end can be replaced by the customer as long as the new one is rated at a minimum of 20 amps.

2.3. Power Requirements

The voltage requirement of your Pro-Wedge XL hot wedge welder depends on voltage specified when ordered. If you intend to operate your welder on 220vac, it will operate properly with voltage ranging from 208vac to 240vac. If you intend to operate your welder on 110vac it will operate properly with voltage ranging from 104vac to 125vac.

Note:

The above operating voltage ranges refer to actual voltage at point of welder plug-in. In other words, the voltage under load at the welder end of extension cord. To measure voltage under load, connect the welder to the extension cord and generator that will be used. Start the generator and turn both welder power switches to the on position. While the number 1 indicator light on the temperature controller is illuminated and the wedge is heating, separate the plug at the end of the welders power cord just enough to expose the prongs. Using a digital voltmeter, measure the voltage under load between the hot and neutral prong for 110v operation and both hot prongs for 220v operation.

This procedure should only be performed by a qualified electrician.



2.4. Generator Recommendation

If using house power from a building circuit, please contact the manufacturer for advice on plug and cord configuration. In-field generators should be rated for at least 3500 watts, however a rating of 5000 watts or more is recommended in order to obtain the best welder performance and temperature control. As a rule, the higher the wattage of the generator, the better the performance of the welder. Keep in mind that the length and wire gauge of the extension cord being used combined with the capacity of the generator will ultimately determine the operating voltage reaching the welder.

2.5. Extension Cords

Extension cords should be at least 12 gauge and regardless of overall length should have a minimum of plug-end connections.

Maximum recommended extension cord length:

10 gauge, 3 wire 12 gauge, 3 wire 14 gauge, 3 wire

500 Feet 250 Feet 100 Feet



Section 3: Set-Up Procedure

SET-UP PROCEDURE

INITIAL SET-UP for Various mil thickness tolerances:

The initial set-up of the Pro-Wedge XL is by far the most critical aspect of not only quality welding results, but also wear and tear on the unit itself. Adjusting the Pro-Wedge XL too tightly can result in excessive wear on drive-train parts, such as gears, chains, sprockets, etc.

THE RECOMMENDED SET-UP PROCEDURE (BEFORE HEATING UP THE UNIT) IS AS FOLLOWS:

*** Refer to Figures 1 through 7, page 8-11 of this manual throughout procedure***

From the same mil thickness material as that to be welded, cut 2 pieces approximately 4" X 18", and 3 smaller pieces approximately ½" X 6". These 5 pieces of material will be used as "gauges" for setting the 3 adjustments.

3.1 Adjustment #1: Wedge Centering

- A. Adjust the upper and lower contour rollers away from the wedge so they will not interfere with the wedge centering adjustment.
 - Remove the lower Contour Roller Adjustment Cover, Fig (1) 1, to expose the adjustment screw. With a 10mm box end wrench, loosen the lock-nut. With a 3mm hex wrench, turn the adjustment set screw counter-clock wise, lowering the lower contour roller assembly Fig (1) 2, away from the wedge. With a 10mm wrench loosen the lock-nut on the Upper Contour roller adjustment knob Fig (5) 3. Turn the adjustment knob counter-clock-wise, raising the Upper Contour Roller Assembly Fig (5) 4, away from the wedge.
- B. Place two of the 1/2" X 6" pieces of material, each folded in half, between the Nip Rollers, Figure (2) 1. This is to simulate 2 layers of material between the rollers. Be sure these pieces do not extend past the Nip Rollers into the machine. Rotate the nip Pressure Cam Fig (2) 2, to the corresponding mil thickness position indicated on the side of the pressure cam by rotating the Nip Pressure Cam Lever Fig (2) 3, Clockwise.
- C. Move the Wedge, to the ENGAGED/ **Welding Position** by rotating the Wedge Engagement Handle, Figure (7) 2, counter-clock-wise. With a 5mm hex wrench, adjust the wedge as needed, up or down, to center the Wedge between the Nip Rollers. See Fig. (7) 3., for adjustment Bolt Location. (Clock-wise rotation lowers wedge)



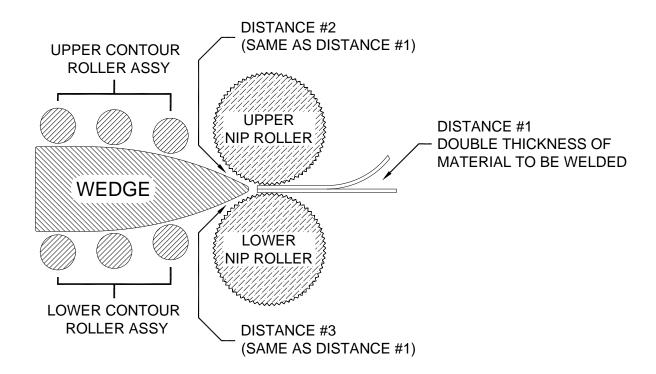
3.2 Adjustment #2: Wedge Forward Travel

Before beginning this adjustment make sure the lock in handle has no free play. If it does you will need to tighten the pinion gear set screw. Fig (6) 2.

This adjustment controls how close the Wedge is to the Nip Rollers when it is in the ENGAGED/WELDING position.

A. To adjust clearance, refer to Fig (4), pull out the wedge Lock –in Plunger (1) on the Wedge Engagement Handle (2), rotate the handle to a central position between the Hold-down Screws (3), Loosen the screws and rotate the handle counter-clockwise until the lock-in Plunger drops into the Lock-in Hole (4). (The Lock-In plate should now rotate with the engagement handle.)

NOTE: Position the Wedge so the distance between the upper tip of the Wedge to the Upper Nip Roller is the same distance as between the two Nip Rollers (twice the thickness of the material you will be welding). This same clearance should also be maintained between the lower tip of the Wedge and the Lower Nip Roller.



Pro-Wedge XL ™ Operator's Manual Rev A.doc



To Lock down the adjustments, hold down the Wedge Lock-In Plate, (5), pull Lock-in Plunger out, and rotate handle to central location between Hold-down Screws (do not allow the Lock-In Plate to move while rotating handle). Tighten Hold-down Screws and move Lock-in Plunger back to Lock-in Hole, check that the adjustment did not change.

3.3 Adjustment #3: Upper and Lower Contour Rollers

With the Wedge locked into the Engaged welding position, and the 1/2" X 6" pieces of material still between the Nip Rollers Fig (2), you are ready to make adjustments.

- A. Insert one of the 4" X 18" pieces of material between the Lower Contour Roller Assembly and the Wedge Fig (1). This piece should extend out of the Front of the machine (opposite end from the Nip Rollers). Adjust the Lower Contour Rollers up, Clockwise, until the Wedge begins to move up slightly.
- B. Insert the other 4" X 18" piece of material between the Upper Contour Roller Assembly and Wedge Fig (5). Adjust the Upper Contour Rollers Down, Clock-wise, to obtain the desired Tension.

NOTE: This should be a "snug fit." To check, hold onto the upper piece of material at the front end of the machine and move it forward and backward. Check the lower adjustment the same way (you may need to further adjust the lower contour roller assembly). Now, make sure the tip of the Wedge is still centered between the Nip Rollers.

- C. Once the desired tension is set, tighten both upper and Lower Contour Roller assembly lock –nuts, being careful not to tighten them too much.
- D. Replace Lower Contour Roller Adjustment Cover.
- E. Remove all pieces of material.

Note: Although this procedure may appear time consuming at first, with a little practice, the entire set-up should only take a few minutes.

3.4 Wedge Timing

- A. Wedge timing is the position of the wedge in its engaged/welding position, in relation to the engagement handle lock-in plunger to lock-in hole position.
- B. If the wedge timing is off you will lose the ability to adjust your machine to its full range of adjustment (the position of the wedge in relation to the nip rollers when in the engaged/welding position).



3.5 Re-Timing the Wedge

Loosen the two lock-in plate screws, Fig (4) 3. Position the lock-in plate so the two screws are centered in the elongation grooves of the plate Fig (4), tighten screws. Now pull out the engagement handle as far as you can (5/8") and rotate engagement handle clock-wise, release handle back in and rotate handle counter clock-wise moving the wedge towards the nip rollers, continue this process until the lock-in plunger drops into the lock-in hole on the lock-in plate and the tip of the wedge has about 1/8" clearance between it and the lower nip roller, see Fig (3).

3.6 Wedge Removal

- A. Disconnect cartridge heater and thermocouple plug from bottom of control cabinet, Fig (5)
- B Remove the front and rear frame bolts (1/4" or 6mm hex wrench), Fig (7) 1.
- C. Hinge side frame up and install one of the frame bolts into the front bolt hole to hold machine hinged open, Fig (3) 1 (it will thread into a hidden hole).
- D. Rotate wedge engagement handle counter clockwise until the drop-in plunger drops into the lock-in hole on the lock in plate.
- E. Pull the wedge engagement handle out far enough to insert the other frame bolt between the lock-in plate and the wedge engagement handle, Fig (6) 1 (this will hold the pinion gear disengaged from the wedge rack gear so the wedge can be removed easily).
- F. Release the cartridge heaters and thermocouple from the behind the heater cable retention disc, Fig (5) 2.
- G. Push down on the front of the wedge carriage while lifting up the tip of the wedge and pull the wedge assembly out of the machine.

NOTE: To prevent the **Wedge Timing** from being thrown off, do not disturb the wedge engagement handle position while the wedge is removed from the machine.



Figure (1)

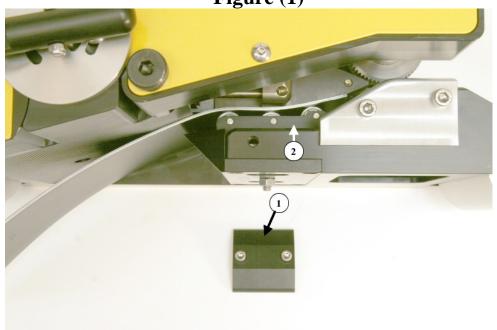
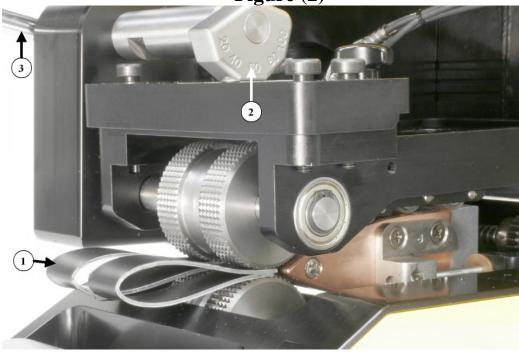


Figure (2)



Pro-Wedge XL ™ Operator's Manual Rev A.doc



Figure (3)

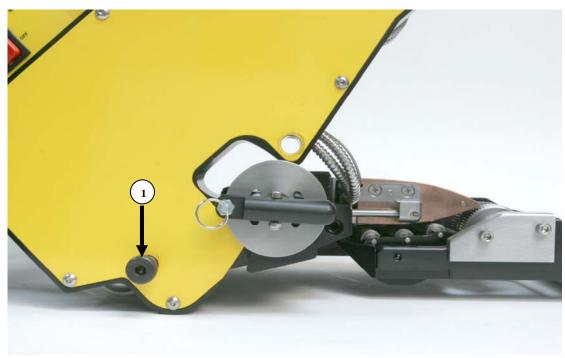
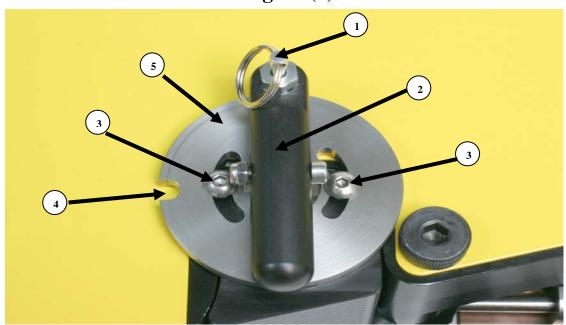
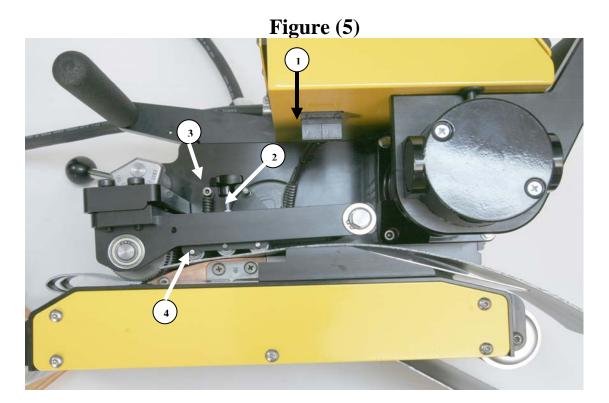


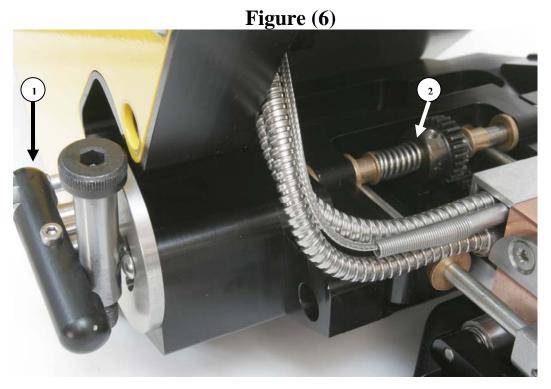
Figure (4)



Pro-Wedge XL $^{\text{TM}}$ Operator's Manual Rev A.doc



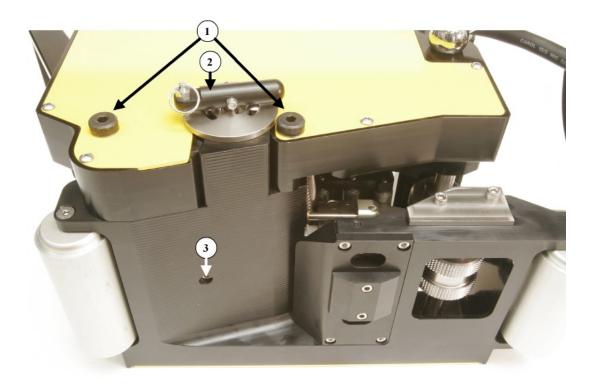


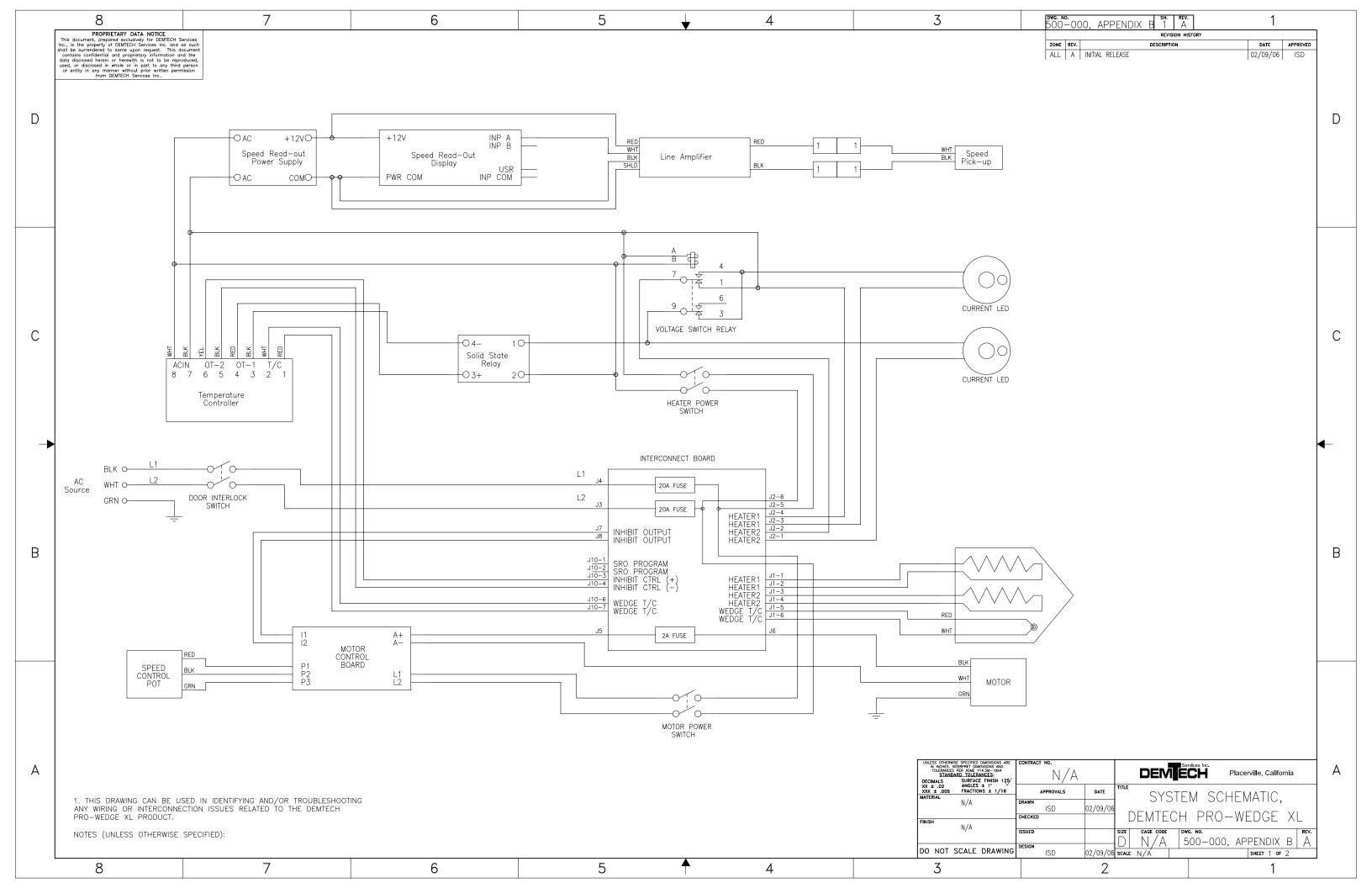


Pro-Wedge XL ™ Operator's Manual Rev A.doc



Figure (7)





Warranty

DEMTECH Services, Inc. warrants all equipment of its manufacture to be free from defects in materials, workmanship, mechanical parts, and labor for a period of one year from the date of shipment to the original buyer and ninty days for electrical. This warranty excludes normal wear items such as gears, bearings and chains. The liability under this warranty is limited to replacement parts and labor on equipment when the equipment is returned prepaid to the factoryor its authorized service center with prior authorization from DEMTECH Services, Inc., and upon examination by DEMTECH Services, Inc., is determined to be defective. At DEMTECH Services, Inc.'s option, a service representative may be dispatched to the equipment location.

As an additional protection, DEMTECH Services, Inc. warrants that for a period of 90 days from the date of shipment to the original buyer, pending prior authorization from DEMTECH Services, Inc., there will be no charge for service related shipping of parts and/or equipment or for authorized travel of a service representative to the equipment location. After 90 days, all costs incurred for shipping the equipment or parts thereof or for travel are the responsibility of the buyer. Our warranty for this equipment is rendered void if the unit has been repaired, taken apart or modified, or attempted to be, unless such actions have been taken in accordance with written instructions received from DEMTECH Services, Inc. The warranty is also void if the equipment has been subjected to abuse, accident or other abnormal conditions.

IF ANY FAULT DEVELOPS, THE FOLLOWING STEPS SHOULD BE TAKEN:

- Notify DEMTECH Services, Inc. by calling 1-888-324-9353. Overseas customers should contact the local DEMTECH authorized service center. Please be prepared with the model number, serial number and full details of the difficulty. Upon receipt of this information, service data or shipping instructions will be provided by DEMTECH Services, Inc. Do not return the unit for repair without first contacting the factory or its representative for instructions.
- 2. After the initial 90 day period, on receipt of shipping instructions, forward the equipment prepaid to the factory or its authorized service center as instructed. If requested, an estimate of the charges will be made before work begins, especially with those cases where the DEMTECH Services, Inc. product is not covered by the warranty.
- 3. If the original carton and packing are not available, the product should be packed in a container with a strong exterior and surrounded by a protective layer of shock-absorbing material. DEMTECH Services, Inc. advises returning the equipment at full value to the carrier.

DEMTECH Services, Inc. reserves the right to make changes in design at any time without incurring any obligation to install the same changes on units previously purchased.

This warranty states the essence of the obligations or liabilities on the part of DEMTECH Services, Inc. THE FORMAL, COMPLETE AND EXCLUSIVE STATEMENT OF DEMTECH SERVICES, INC.'S WARRANTY IS CONTAINED IN ITS QUOTATIONS, ACKNOWLEDGEMENTS AND INVOICES. DEMTECH Services, Inc. neither assumes, nor authorizes any person to assume for it, any liability in connection with the sale of its equipment other than those set forth herein.

Inspiration and innovative engineering has re-defined wedge welders.

Introducing the Pro-Wedge XL by





All common spare parts are completely interchangeable with a **Wedge-it Series 2000** welder including the following:

- Wedge Assembly
- Gears & Sprockets
- Shafts and Bearings
- Nip Rollers, Chains
- Contour Roller Assemblies
- Temperature Controller
- Motor Control Board
- Solid State Relay
- Speed Readout
- Etc....



Easy to read, well protected controls. Hinged panel opens in seconds (no tools required) for instant access to components.



The wedge assembly can be **removed in 30 seconds** by simply unplugging the external heater and thermocouple plug-in wire connector, removing two shoulder bolts, and opening up the frames as shown above. Just lift the wedge assembly and pull it out!





Contact "Demo Dave" today for pricing and lead time on new units or upgrades on existing Wedge-It Series 2000 welders.

^{*} Shipping case included. Custom models available upon request. Call for details.

[•] Fax: (530) 621-0150 • demodave@demtech.com

Pro-Wedge XL

Heavy Duty Wedge Welder

The PRO-Wedge XL, Model 500-0100XL Wedge Welder, manufactured by DEMTECH Services, Inc., is the new standard of the industry wedge welder for production welding HDPE geomembrane seams. Drawing from many years of experience in the plastic welding industry, we've designed features and functions into its design to satisfy the needs of the most demanding welding technicians on the most demanding job sites.

Here are just a few of the many exclusive features that make the PRO-Wedge XL the heavy duty welder of choice for thick and/or textured PE materials:

- ♦ All common replacement parts are interchangeable with a Wedge-it series 2000 welder.
- ♦ Wedge assembly can be removed in 30 seconds! Minimizes down-time.
- ♦ External Plug-in connector for heaters and thermocouple.
- Spring loaded retaining disc protects heater/T.C. wires from wear.
- ♦ Hinged control panel for instant access to electrical components.
- ♦ Automatic safety switch shuts off power to control box when cover is opened.
- ♦ Auto-switching voltage selection relay for 110/220V operation.
- ♦ Many other time and money saving features. Too many to list1









Technical Specifications:

Model Number: 500-0100XL
Weight (welder only) 52 lbs. (23.5 kilos)
Shipping Weight 66 lbs. (30 kilos)

Dimensions (welder only) 16"X11"X 12" (40.6 X 28 X 30 cm)

Material Range HDPE, LLDPE Welding Range 40-120 mil (1.0-3.0mm)

Operating Voltage 110-250 VAC (Auto Switching)

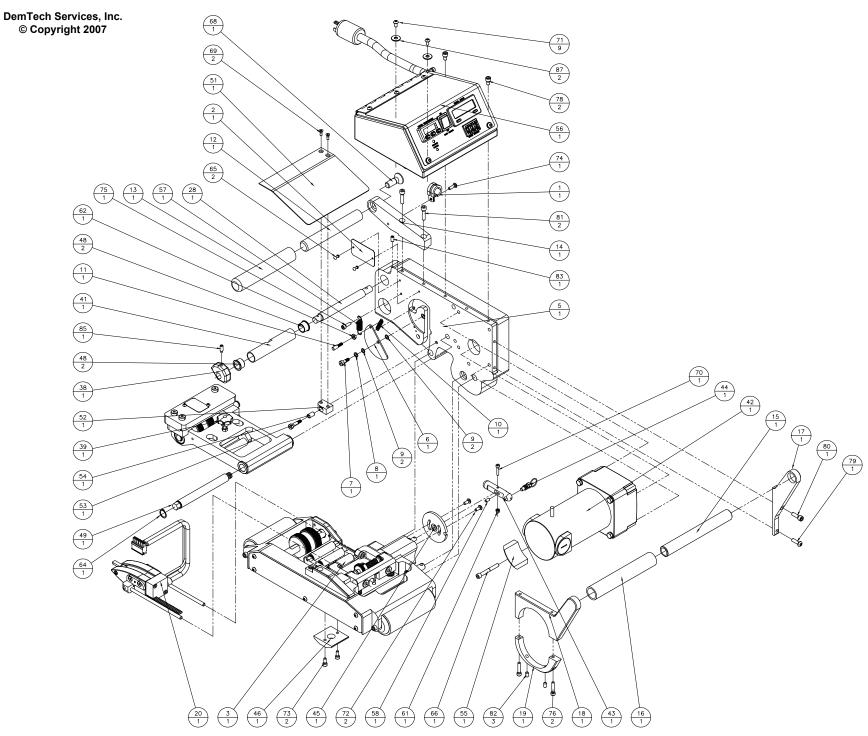
Power Consumption 1400W, 6-13 Amps

Packaging Sturdy molded case w/foam insert



Pro-Wedge XL Appendix F

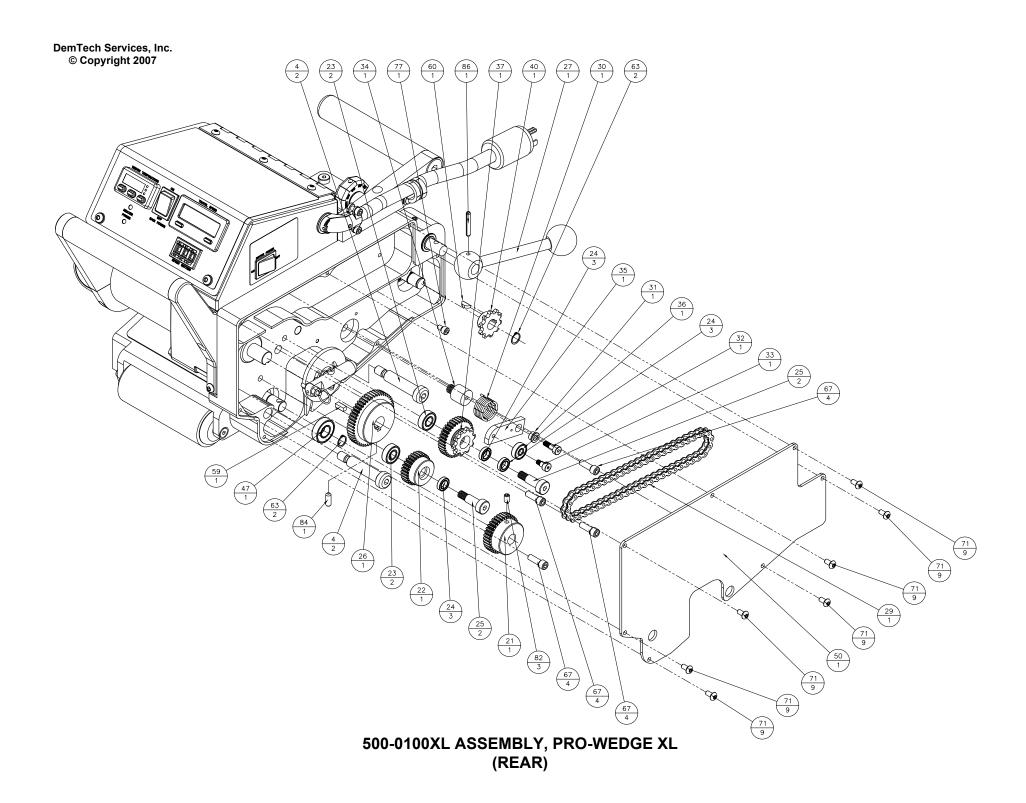
500-0100XL Assembly, Pro-Wedge XL (Front)	
500-0100XL Parts List	F2
500-0100XL Assembly, Pro-Wedge XL (Rear)	F3
500-0100XL Parts List	. F4
500-1005XL/A Assembly, Pro-Wedge XL Controller Housing	F5
500-1005XL/A Parts List	. F6
500-1006XL/A Assembly, Pro-Wedge XL Control Panel	F7
500-1006XL/A Parts List	. F8
500-101XL/A Assembly, Main Frame	F9
500-101XL/A Parts List	
500-167/A Assembly, Nip Arm, XL	. F11
500-167/A Parts List	
500-125CMPLT/700/XL Wedge Assembly, Split, Complete, XL	. F13
500-125CMPLT/700/XL Parts List	
500-125CMPLT/700/S/XL Wedge Assembly, Solid, Complete, XL	. F13
500-125CMPLT/700/S/XL Parts List	
500-120.4/A Assembly, Contour Roller, Triple, Lower	. F15
500-120.4/A Parts List	
500-120.5/A Assembly, Contour Roller, Triple, Upper	. F15
500-120.5/A Parts List	



500-0100XL ASSEMBLY, PRO-WEDGE XL (FRONT)

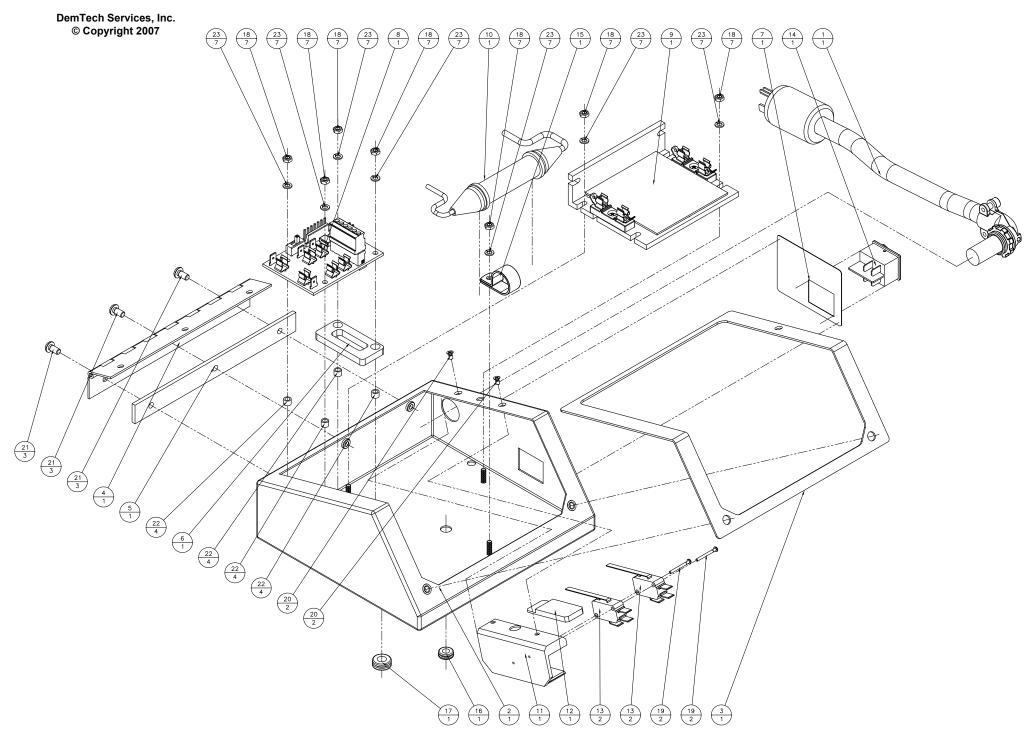
500-0100XL ASSEMBLY, PRO-WEDGE XL PARTS LIST

ITEM	PART NO.	TITLE	QTY	ITEM	PART NO.	TITLE	QTY
1	100-235	MOUNT, CONDUIT, #MS21919-WDG10	1	45	500-176XL	PLATE, DROP-IN	1
2	100-399	NAME PLATE / SERIAL # PLATE	1	46	500-179XL	COVER, LOWER CONTOUR, ADJUSTMENT	1
3	500-101XL/A	ASSEMBLY, MAIN FRAME	1	47	500-197	BEARING, SHAFT / 99R8 2RS	1
4	500-101AXL	SHOULDER BOLT, FRAME LOCK, 1/2" X 2"	2	48	500-199	BUSHING, CAM SHAFT SLEEVE	2
5	500-102XL	FRAME, SIDE	1	49	500-1001A	SHAFT, NIP PIVOT, NEW	1
6	500-102AXL	DISC, HEATER CABLE RETENTION	1	50	500-1012XL	COVER, SIDE FRAME	1
7	500-102BXL	SHOULDER SCREW, RETENTION DISC	1	51	500-1014XL	GUIDE, MATERIAL	1
8	500-102DXL	SPRING WASHER, RETENTION DISC	1	52	500-1014AXL	MOUNT, MATERIAL GUIDE	1
9	500-102EXL	NYLON WASHER, RETENTION DISC	2	53	500-1014CXL	SHOULDER BOLT, MAT GUIDE, M6 X 16	1
10	500-102FXL	RETURN SPRING, RETENTION DISC	1	54	500-1014DXL	BUSHING, MATERIAL GUIDE, MOUNT	1
11	500-102GXL	THUMB SCREW, RETENTION DISC	1	55	500-1015	DEFLECTOR, MATERIAL	1
12	500-103XL	HANDLE, REAR	1	56		ASSY, CONTROLLER COMPLETE, XL, YEL	1
13	500-103AXL	GRIP, REAR HANDLE	1	57	500-1027	SPRING, NIP RETURN	1
14	500-104XL	BRACKET, REAR HANDLE	1	58	STOCK	DOWEL PIN, 3/16" OD X 3/8" LONG, 416 SS KEY, 3/16" X 3/16" X 1/2" LONG, STANDARD,	1
15	500-105XL	HANDLE, FRONT	1	59	STOCK	HIGH CARBON PLAIN STEEL	1
16	500-105AXL	GRIP, FRONT HANDLE	1	60	STOCK	KEY, WOODRUFF, 1/8" X 1/2" FLAT BOTTOM, ALLOY STEEL	1
17	500-107XL	BRACKET, FRONT HANDLE	1	61	STOCK	NUT, HEX-LOCK, M4, NYLON INSERT, SS	1
18	500-109XL	BRACKET, DRIVE MOTOR	1	62	STOCK	NUT, MACHINE SCREW HEX, 10-32, SMALL-PATTERN. SS	1
19	500-113XL	CLAMP, MOTOR BRACKET	1	63	STOCK	RETAINING RING, EXTERNAL, 1/2" SHAFT,	2
	500-125	WEDGE ASSY, SPLIT, COMPLETE				BLACK PHOSPHATE STEEL RETAINING RING, EXTERNAL, 5/8" SHAFT,	
20	CMPLT/700/XL	W/ SHAFTS & PLUGS, XL	1	64	STOCK	BLACK PHOSPHATE STEEL	1
21	500-139	GEAR, LOWER DRV SHFT, 35 TOOTH, MOD	1	65	STOCK	RIVET, 1/8" BLIND, DOME STYLE, SS	2
22	500-140	GEAR, IDLER, 28 TOOTH, MODIFIED	1	66	STOCK	SCREW, 1/4-20 X 2" LG, SOCKET HD CAP, SS	1
23	500-141	BEARING, IDLER & COMP GEAR	2	67	STOCK	SCREW, 1/4-28 X 3/4" LONG, SOCKET HEAD CAP, SS	4
24	500-141A	BEARING, IDLER & COMP GEAR, SMALL	3	68	STOCK	SCREW, M12 X 1.75 X 35mm LONG, FLAT HEAD CAP, SS	1
25	500-142	SHOULDER BOLT, IDLER GEAR	2	69	STOCK	SCREW, M4 X .7 X 12mm LONG, FLAT HEAD CAP, SS	2
26	500-145	GEAR, MOTOR DRIVE, 50 TOOTH, MODIFIED	1	70	STOCK	SCREW, M4 X .7 X 20mm LONG, SOCKET HEAD CAP, SS	1
27	500-150	LEVER, CAM SHAFT W/ KNOB	1	71	STOCK	SCREW, M5 X .8 X 10mm LONG, BUTTON HEAD CAP, SS	9
28	500-152	SHAFT, CAM	1	72	STOCK	SCREW, M5 X .8 X 12mm LONG, BUTTON HEAD CAP. SS	2
29	500-154.35	NIP CHAIN, UPPER, #35	1	73	STOCK	SCREW, M5 X .8 X 12mm LONG, SOCKET HEAD CAP. SS	2
30	500-156	SPRING, IDLER ARM	1	74	STOCK	SCREW, M5 X .8 X 16mm LONG, BUTTON HEAD CAP, SS	1
31	500-157	BUSHING, IDLER ARM PIVOT	1	75	STOCK	SCREW, M5 X .8 X 16mm LONG,	1
20	500 450	CHOULDED DOLT IDLED ADM DIVOT	4	70	CTOOK	SOCKET HEAD CAP, SS SCREW, M5 X .8 X 25mm LONG,	
32	500-158	SHOULDER BOLT, IDLER ARM PIVOT	1	76	STOCK	SOCKET HEAD CAP, SS	2
33	500-158.35	SHOULDER BOLT, BEARING TO IDLER ARM	1	77	STOCK	SCREW, M5 X .8 X 8mm LONG, SOCKET HEAD CAP, SS	1
34	500-159	MANDREL, IDLER ARM	1	78	STOCK	SCREW, M6 X 1 X 10mm LONG, SOCKET HEAD CAP, SS	2
35	500-160.1	ARM, IDLER, NEW	1	79	STOCK	SCREW, M6 X 1 X 20mm LONG, BUTTON HEAD CAP, SS	1
36	500-162	BEARING, UPPER NIP CHAIN TENSIONER	1	80	STOCK	SCREW, M6 X 1 X 20mm LONG, SOCKET HEAD CAP, SS	1
37	500-164-35	GEAR, COMPOSITE, WELDMENT	1	81	STOCK	SCREW, M6 X 1 X 25mm LONG, SOCKET HEAD CAP, SS	2
38	500-166	CAM, ADJUSTMENT	1	82	STOCK	SCREW, SET, M6 X 1 X 10mm LONG, CUP POINT ALLEN, SS	3
39	500-167/A	ASSEMBLY, NIP ARM, XL	1	83	STOCK	SCREW, SET, M6 X 1 X 12mm LONG, CUP POINT ALLEN, SS	1
40	500-168.35	SPROCKET, NIP DRIVE, 10 TOOTH, MODIFIED	1	84	STOCK	SCREW, SET, M6 X 1 X 16mm LONG, CUP POINT ALLEN, SS	1
41	500-169	SLEEVE, CAM SHAFT	1	85	STOCK	SCREW, SET, M6 X 1 X 16mm LONG, FULL DOG POINT ALLEN, SS	1
42	500-170	MOTOR, DRIVE	1	86	STOCK	SPRING PIN, 3/16" OD X 1-1/4" LONG, SS	1
43	500-173XL	HANDLE, WEDGE ENGAGE	1	87	STOCK	WASHER, FENDER, M6, 6.4mm ID X 18mm OD X 1.6mm THICK, ZINC PLATED STEEL	2
44	500-174	PLUNGER, HAND RETRACTABLE	1			A LOUBLINGS, ZINGT LATED STELL	+



500-0100XL ASSEMBLY, PRO-WEDGE XL PARTS LIST

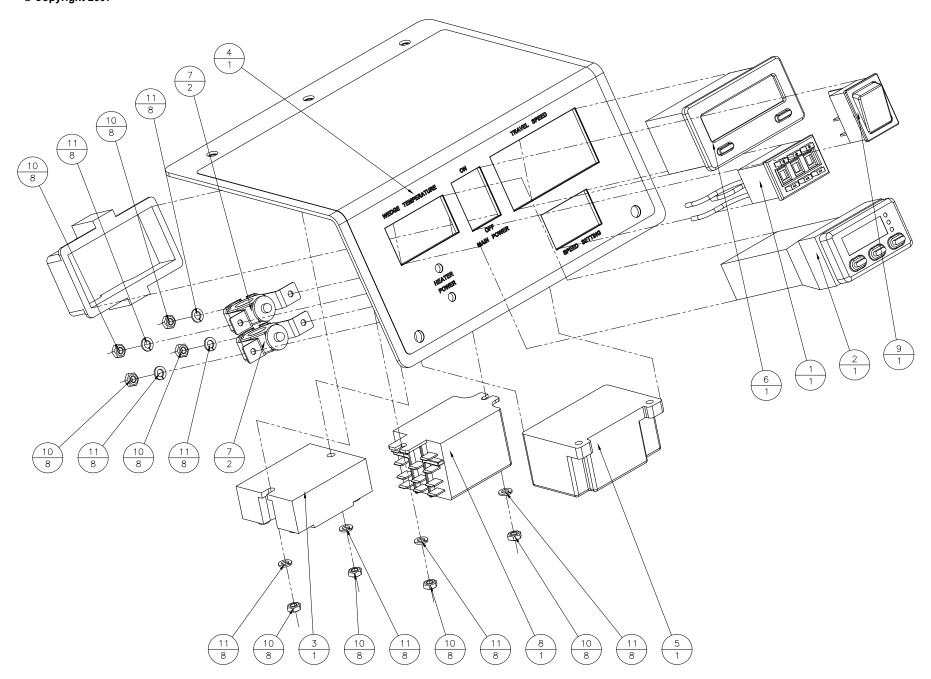
ITEM	PART NO.	TITLE	QTY	ITEM	PART NO.	TITLE	QTY
1	100-235	MOUNT, CONDUIT, #MS21919-WDG10	1	45	500-176XL	PLATE, DROP-IN	1
2	100-399	NAME PLATE / SERIAL # PLATE	1	46	500-179XL	COVER, LOWER CONTOUR, ADJUSTMENT	1
3	500-101XL/A	ASSEMBLY, MAIN FRAME	1	47	500-197	BEARING, SHAFT / 99R8 2RS	1
4	500-101AXL	SHOULDER BOLT, FRAME LOCK, 1/2" X 2"	2	48	500-199	BUSHING, CAM SHAFT SLEEVE	2
5	500-102XL	FRAME, SIDE	1	49	500-1001A	SHAFT, NIP PIVOT, NEW	1
6	500-102AXL	DISC, HEATER CABLE RETENTION	1	50	500-1012XL	COVER, SIDE FRAME	1
7	500-102BXL	SHOULDER SCREW, RETENTION DISC	1	51	500-1014XL	GUIDE, MATERIAL	1
8	500-102DXL	SPRING WASHER, RETENTION DISC	1	52	500-1014AXL	MOUNT, MATERIAL GUIDE	1
9	500-102EXL	NYLON WASHER, RETENTION DISC	2	53	500-1014CXL	SHOULDER BOLT, MAT GUIDE, M6 X 16	1
10	500-102FXL	RETURN SPRING, RETENTION DISC	1	54	500-1014DXL	BUSHING, MATERIAL GUIDE, MOUNT	1
11	500-102GXL	THUMB SCREW, RETENTION DISC	1	55	500-1015	DEFLECTOR, MATERIAL	1
12	500-103XL	HANDLE, REAR	1	56		ASSY, CONTROLLER COMPLETE, XL, YEL	1
13	500-103AXL	GRIP, REAR HANDLE	1	57	500-1027	SPRING, NIP RETURN	1
14	500-104XL	BRACKET, REAR HANDLE	1	58	STOCK	DOWEL PIN, 3/16" OD X 3/8" LONG, 416 SS KEY, 3/16" X 3/16" X 1/2" LONG, STANDARD,	1
15	500-105XL	HANDLE, FRONT	1	59	STOCK	HIGH CARBON PLAIN STEEL	1
16	500-105AXL	GRIP, FRONT HANDLE	1	60	STOCK	KEY, WOODRUFF, 1/8" X 1/2" FLAT BOTTOM, ALLOY STEEL	1
17	500-107XL	BRACKET, FRONT HANDLE	1	61	STOCK	NUT, HEX-LOCK, M4, NYLON INSERT, SS	1
18	500-109XL	BRACKET, DRIVE MOTOR	1	62	STOCK	NUT, MACHINE SCREW HEX, 10-32, SMALL-PATTERN. SS	1
19	500-113XL	CLAMP, MOTOR BRACKET	1	63	STOCK	RETAINING RING, EXTERNAL, 1/2" SHAFT,	2
	500-125	WEDGE ASSY, SPLIT, COMPLETE				BLACK PHOSPHATE STEEL RETAINING RING, EXTERNAL, 5/8" SHAFT,	
20	CMPLT/700/XL	W/ SHAFTS & PLUGS, XL	1	64	STOCK	BLACK PHOSPHATE STEEL	1
21	500-139	GEAR, LOWER DRV SHFT, 35 TOOTH, MOD	1	65	STOCK	RIVET, 1/8" BLIND, DOME STYLE, SS	2
22	500-140	GEAR, IDLER, 28 TOOTH, MODIFIED	1	66	STOCK	SCREW, 1/4-20 X 2" LG, SOCKET HD CAP, SS	1
23	500-141	BEARING, IDLER & COMP GEAR	2	67	STOCK	SCREW, 1/4-28 X 3/4" LONG, SOCKET HEAD CAP, SS	4
24	500-141A	BEARING, IDLER & COMP GEAR, SMALL	3	68	STOCK	SCREW, M12 X 1.75 X 35mm LONG, FLAT HEAD CAP, SS	1
25	500-142	SHOULDER BOLT, IDLER GEAR	2	69	STOCK	SCREW, M4 X .7 X 12mm LONG, FLAT HEAD CAP, SS	2
26	500-145	GEAR, MOTOR DRIVE, 50 TOOTH, MODIFIED	1	70	STOCK	SCREW, M4 X .7 X 20mm LONG, SOCKET HEAD CAP, SS	1
27	500-150	LEVER, CAM SHAFT W/ KNOB	1	71	STOCK	SCREW, M5 X .8 X 10mm LONG, BUTTON HEAD CAP, SS	9
28	500-152	SHAFT, CAM	1	72	STOCK	SCREW, M5 X .8 X 12mm LONG, BUTTON HEAD CAP. SS	2
29	500-154.35	NIP CHAIN, UPPER, #35	1	73	STOCK	SCREW, M5 X .8 X 12mm LONG, SOCKET HEAD CAP. SS	2
30	500-156	SPRING, IDLER ARM	1	74	STOCK	SCREW, M5 X .8 X 16mm LONG, BUTTON HEAD CAP, SS	1
31	500-157	BUSHING, IDLER ARM PIVOT	1	75	STOCK	SCREW, M5 X .8 X 16mm LONG,	1
20	500 450	CHOULDED DOLT IDLED ADM DIVOT	4	70	CTOOK	SOCKET HEAD CAP, SS SCREW, M5 X .8 X 25mm LONG,	
32	500-158	SHOULDER BOLT, IDLER ARM PIVOT	1	76	STOCK	SOCKET HEAD CAP, SS	2
33	500-158.35	SHOULDER BOLT, BEARING TO IDLER ARM	1	77	STOCK	SCREW, M5 X .8 X 8mm LONG, SOCKET HEAD CAP, SS	1
34	500-159	MANDREL, IDLER ARM	1	78	STOCK	SCREW, M6 X 1 X 10mm LONG, SOCKET HEAD CAP, SS	2
35	500-160.1	ARM, IDLER, NEW	1	79	STOCK	SCREW, M6 X 1 X 20mm LONG, BUTTON HEAD CAP, SS	1
36	500-162	BEARING, UPPER NIP CHAIN TENSIONER	1	80	STOCK	SCREW, M6 X 1 X 20mm LONG, SOCKET HEAD CAP, SS	1
37	500-164-35	GEAR, COMPOSITE, WELDMENT	1	81	STOCK	SCREW, M6 X 1 X 25mm LONG, SOCKET HEAD CAP, SS	2
38	500-166	CAM, ADJUSTMENT	1	82	STOCK	SCREW, SET, M6 X 1 X 10mm LONG, CUP POINT ALLEN, SS	3
39	500-167/A	ASSEMBLY, NIP ARM, XL	1	83	STOCK	SCREW, SET, M6 X 1 X 12mm LONG, CUP POINT ALLEN, SS	1
40	500-168.35	SPROCKET, NIP DRIVE, 10 TOOTH, MODIFIED	1	84	STOCK	SCREW, SET, M6 X 1 X 16mm LONG, CUP POINT ALLEN, SS	1
41	500-169	SLEEVE, CAM SHAFT	1	85	STOCK	SCREW, SET, M6 X 1 X 16mm LONG, FULL DOG POINT ALLEN, SS	1
42	500-170	MOTOR, DRIVE	1	86	STOCK	SPRING PIN, 3/16" OD X 1-1/4" LONG, SS	1
43	500-173XL	HANDLE, WEDGE ENGAGE	1	87	STOCK	WASHER, FENDER, M6, 6.4mm ID X 18mm OD X 1.6mm THICK, ZINC PLATED STEEL	2
44	500-174	PLUNGER, HAND RETRACTABLE	1			A LOUBLINGS, ZINGT LATED STELL	+



500-1005XL/A ASSEMBLY, PRO-WEDGE XL, CONTROLLER HOUSING

500-1005XL/A ASSEMBLY, PRO-WEDGE XL, CONTROLLER HOUSING PARTS LIST

ITEM	PART NO.	TITLE	QTY
1	100-475/A	ASSEMBLY, POWER CORD, 120V	1
2	500-1005XL	HOUSING, CONTROLLER	1
3	500-1005AXL	GASKET, CONTROLLER HOUSING	1
4		HINGE, CONTROLLER HOUSING	1
5	500-1005CXL	SPACER, HINGE, CONTROLLER HOUSING	1
6	500-1005DXL	GASKET, HEATER INTERFACE CONNECTOR	1
7	500-1006BXL	OVERLAY, MOTOR SWITCH	1
8	500-E2XL	CIRCUIT BOARD, INTERCONNECT	1
9	500-E5	MOTOR CONTROL BOARD	1
10	500-E8	AMPLIFIER, PICK-UP	1
11	500-E19AXL	BRACKET, AC POWER INTERLOCK SWITCH	1
12	500-E19BXL	PAD, SWITCH LEVER, REACTION	1
13	500-E26XL	SWITCH, COVER INTERLOCK	2
14	600-06PH	SWITCH, MOTOR/POWER, ON/OFF	1
15	STOCK	CLAMP, 3/4" ID X 1/2" WIDE, NYLON	1
16	STOCK	GROMMET, .250" ID X .375" GROOVE OD, SBR RUBBER	1
17	STOCK	GROMMET, .312" ID X .500" GROOVE OD, SBR RUBBER	1
18	STOCK	NUT, M4 X .7 HEX, SS	7
19	STOCK	SCREW, 2-56 X 7.8" LONG, PAN HEAD SLOTTED, SS	2
20	STOCK	SCREW, M3 X 6mm LONG, FLAT HEAD PHILLIPS, SS	2
21	STOCK	SCREW, M5 X .8 X 10mm LONG, BUTTON HEAD SOCKET, SS	3
22	STOCK	SPACER, .250" OD X .166" ID X .187" LONG, NYLON	4
23	STOCK	WASHER, M4 SPLIT LOCK, SS	7



500-1006XL/A ASSEMBLY, PRO-WEDGE XL CONTROL PANEL

500-1006XL/A ASSEMBLY, PRO-WEDGE XL CONTROL PANEL PARTS LIST

ITEM	PART NO.	TITLE	QTY
1	100-416	POTENTIOMETER, PUSH BUTTON, MOTOR, #754-7975	1
2	100-425	CONTROL BOARD, TEMPERATURE, #935A-1CC0-000G	1
3	100-430	RELAY, #SSR-240-25A-DC1	1
4	500-1006XL	PANEL, CONTROL	1
5	500-E7	SRO POWER SUPPLY	1
6	500-E9	SPEED READOUT	1
7	500-E15	CURRENT INDICATOR, RED	2
8	500-E17RXL	RELAY, VOLTAGE SWITCHING	1
9	600-06PH	SWITCH, MOTOR/POWER, ON/OFF	1
10	STOCK	NUT, M4 X .7 HEX, SS	8
11	STOCK	WASKER, M4 SPLIT LOCK, SS	8

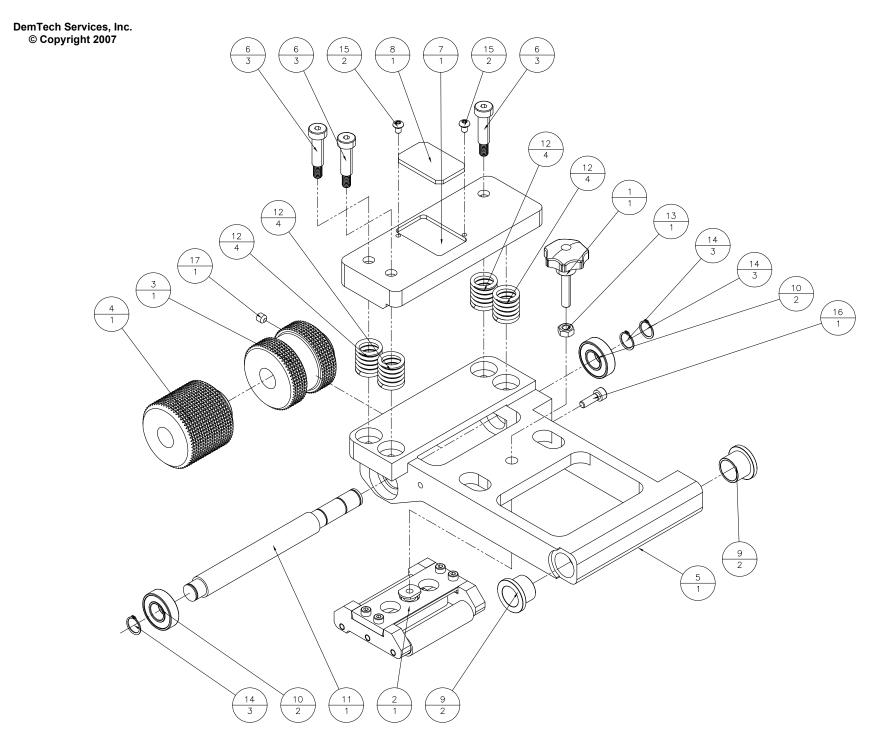
500-101XL/A ASSEMBLY, MAIN FRAME

 $\binom{17}{1}$

(31) 4 29

500-101XL/A ASSEMBLY, MAIN FRAME PARTS LIST

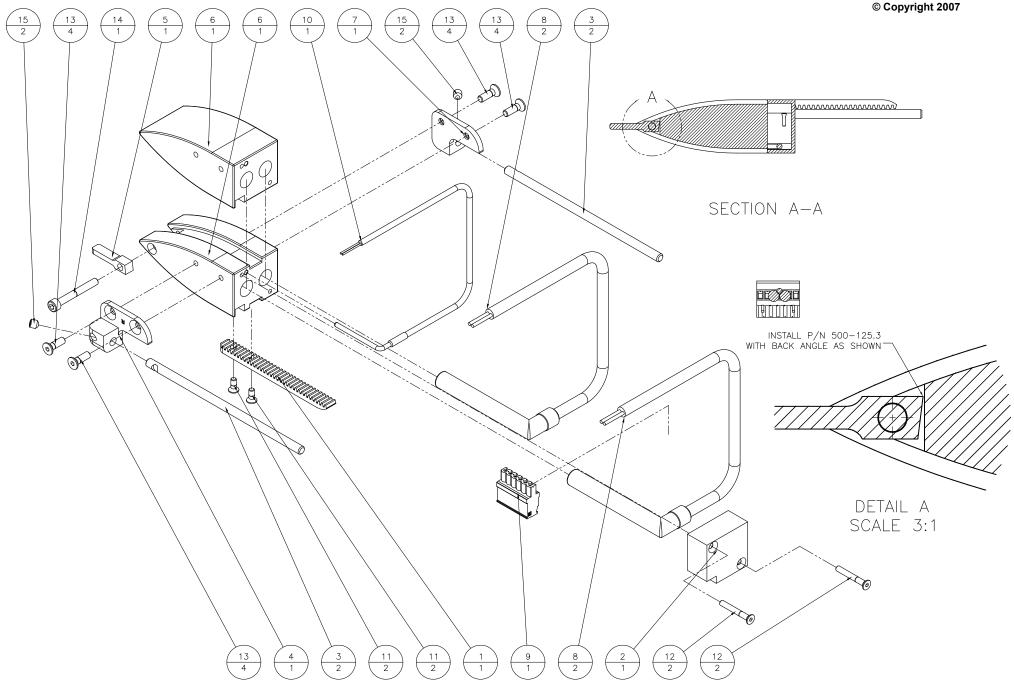
ITEM	PART NO.	TITLE	QTY
1	500-101XL	FRAME, MAIN	1
2	500-101.1XL	PLATE, DROP OUT, LOWER CONTOUR ROLLER	1
3	500-106.1XL	SKID, MATERIAL	1
4	500-108XL	CRADLE, WEDGE PIVOT	1
5	500-110XL	BUSHING, FLANGED, PINION SHAFT, .312 ID X .437 OD X .375 LONG	5
6	500-112	BUSHING, FLANGED, WEDGE LINEAR SHAFT, .250 ID X .500 OD X .625 LONG	4
7	500-114	BAR, CARRIAGE ADJUSTMENT	1
8	500-115	SPRING, WEDGE, PIVOT	2
9	500-116	GEAR, PINION, 24 TOOTH, MODIFIED	1
10	500-117XL	SHAFT, PINION GEAR, XL	1
11	500-117BXL	SPRING, PINION SHAFT	1
12	500-117CXL	BUSHING, PINION GEAR SHAFT	2
13	500-120.4/A	ASSEMBLY, CONTOUR ROLLER, TRIPLE, LOWER	1
14	500-130	NIP ROLLER, SPLIT, HDPE	1
15	500-130A	NIP ROLLER, SOLID, HDPE	1
16	500-132	SHAFT, LOWER NIP	1
17	500-133	SHAFT, LOWER NIP, DRIVE	1
18	500-134	ROLLER, TRAVEL, REAR	1
19	500-135	ROLLER, TRAVEL, END	4
20	500-136	BEARING, TRAVEL ROLLER, 1/4" ID X 1/2" OD X 3/16" WIDE, FLANGED	4
21	500-138	ROLLER, TRAVEL, FRONT	1
22	500-168.35	SPROCKET, NIP DRIVE, 10 TOOTH, MODIFIED	2
23	500-181.35	NIP CHAIN, LOWER #35	1
24	500-197	BEARING, SHAFT / 99R8 2RS	4
25	500-1013XL	COVER, LOWER CHAIN	1
26	500-1014BXL	SUPPORT, MATERIAL GUIDE	1
27	500-1023	CHAIN TENSIONER, GUIDE	1
28	500-1023A	WASHER, LOWER CHAIN GUIDE	1
29	STOCK	KEY, WOODRUFF, 1/8" X 1/2" FLAT BOTTOM, ALLOY STEEL	2
30	STOCK	NUT, HEX, M6 X 1 X 10mm WIDE X 5mm THICK, SS	1
31	STOCK	RETAINING RING, EXTERNAL, 1/2" SHAFT, BLACK PHOSPHATE STEEL	4
32	STOCK	RETAINING RING, EXTERNAL, 5/16" SHAFT, BLACK PHOSPHATE STEEL	1
33	STOCK	SCREW, M5 X .8 X 10mm LONG, BUTTON HEAD CAP, SS	5
34	STOCK	SCREW, M5 X .8 X 10mm LONG, SOCKET HEAD CAP, SS	4
35	STOCK	SCREW, M6 X 1 X 12mm LONG, BUTTON HEAD CAP, SS	2
36	STOCK	SCREW, M6 X 1 X 12mm LONG, SOCKET HEAD CAP, SS	2
37	STOCK	SCREW, M6 X 1 X 16mm LONG, FLAT HEAD CAP, SS	1
38	STOCK	SCREW, M6 X 1 X 16mm LONG, SOCKET HEAD CAP, SS	3
39	STOCK	SCREW, M6 X 1 X 25mm LONG, BUTTON HEAD CAP, SS	3
40	STOCK	SCREW, M6 X 1 X 40mm LONG, SOCKET HEAD CAP, STEEL, SELF-LOCK	1
41	STOCK	SCREW, SET, M5 X .8 X 10mm LONG, CUP POINT ALLEN, SS	1
42	STOCK	SCREW, SET, M6 X 1 X 20mm LONG, CUP POINT ALLEN, SS	1
43	STOCK	SCREW, SET, M6 X 1 X 6mm LONG, CUP POINT ALLEN, SS	1



500-167/A ASSEMBLY, NIP ARM, XL

500-167/A ASSEMBLY, NIP ARM, XL PARTS LIST

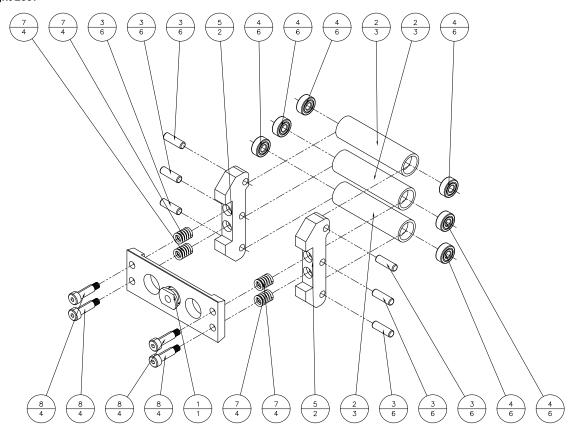
ITEM	PART NO.	TITLE	QTY
1	500-120C	KNOB, UPPER CONTOUR ROLLER ADJUSTMENT	1
2	500-120.5/A	ASSEMBLY, CONTOUR ROLLER, TRIPLE, UPPER	1
3	500-130	NIP ROLLER, SPLIT, HDPE	1
4	500-130A	NIP ROLLER, SOLID, HDPE	1
5	500-167	ARM, NIP	1
6	500-171	SHOULDER BOLT, LOAD PLATE, M8 X 25	3
7	500-180XL	PLATE, LOAD	1
8	500-180AXL	PLATE, CAM WEAR	1
9	500-186	BUSHING, NIP PIVOT	2
10	500-197	BEARING, SHAFT / 99R8 2RS	2
11	500-1002	SHAFT, UPPER NIP	1
12	500-1028	SPRING, LOAD PLATE	4
13	STOCK	NUT, HEX, M6 X 1 X 10mm WIDE X 5mm THICK, SS	1
14	STOCK	RETAINING RING, EXTERNAL, 1/2" SHAFT, BLACK PHOSPHATE STEEL	3
15	STOCK	SCREW, M4 X .7 X 6mm LONG, BUTTON HEAD CAP, SS	2
16	STOCK	SCREW, M5 X .8 X 20mm LONG, SOCKET HEAD CAP, SS	1
17	STOCK	SCREW, SET, M6 X 1 X 6mm LONG, CUP POINT ALLEN, SS	1



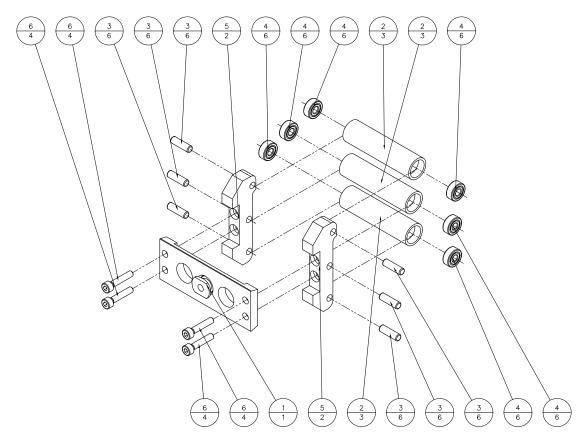
500-125CMPLT / 700 / XL WEDGE ASSEMBLY, SPLIT, COMPLETE, XL 500-125CMPLT / 700 / S / XL WEDGE ASSEMBLY, SOLID, COMPLETE, XL

500-125CMPLT / 700 / XL WEDGE ASSEMBLY, SPLIT, COMPLETE, XL 500-125CMPLT / 700 / S / XL WEDGE ASSEMBLY, SOLID, COMPLETE, XL PARTS LIST

ITEM	PART NO.	TITLE	QTY
1	500-121	RACK, GEAR, 3/8	1
2	500-122.1	HOUSING, WEDGE TAIL /800	1
3	500-123	SHAFT, LINEAR	2
4	500-124.1	MOUNT, WEDGE, RIGHT HAND	1
5	500-125.3	PIN, FLOATING, AIR CHANNEL	1
6	500-125A	WEDGE, LONG SOLID, COPPER	1
6	500-125B	WEDGE, LONG SPLIT, COPPER, 800 WATT	1
7	500-126.1	MOUNT, WEDGE, LEFT HAND	1
8	500-E10C	CARTRIDGE HEATER, 120V, 700W	2
9	500-E10PLUG	PLUG, HEATER/T.C. CONNECTION	1
10	500-E11.1	THERMOCOUPLE, 90 DEGREE	1
11	STOCK	SCREW, M4 X .7 X 10mm LONG, FLAT HEAD CAP, SS	2
12	STOCK	SCREW, M4 X .7 X 30mm LONG, FLAT HEAD CAP, SS	2
13	STOCK	SCREW, M5 X .8 X 16mm LONG, FLAT HEAD CAP, SS	4
14	STOCK	SCREW, M5 X .8 X 40mm LONG, SOCKET HEAD CAP, SS	1
15	STOCK	SCREW, SET, M6 X 1 X 6mm LONG, CUP POINT ALLEN, SS	2



500-120.4/A ASSEMBLY, CONTOUR ROLLER, TRIPLE, LOWER



500-120.5/A ASSEMBLY, CONTOUR ROLLER, TRIPLE, UPPER

500-120.4/A ASSEMBLY, CONTOUR ROLLER, TRIPLE, LOWER PARTS LIST

ITEM	PART NO.	TITLE	QTY
1	500-120A/B	PLATE, CONTOUR ROLLER, W/SWIVEL	1
2	500-120E.1	ROLLER, CONTOUR	3
3	500-120G	DOWEL PIN, CONTOUR ROLLER ASSEMBLY, 3/16" OD X 5/8" LONG, SS	6
		BEARING, CONTOUR ROLLER, .500" OD X .187" ID X .196" WIDE,	
4	500-120H	DOUBLE SEALED	6
5	500-120T	PLATE, ROLLER BLOCK, TRIPLE	2
7	500-120F	SPRING, CONTOUR ROLLER	4
8	500-194	SHOULDER BOLT, LOWER CONTOUR	4

500-120.5/A ASSEMBLY, CONTOUR ROLLER, TRIPLE, UPPER PARTS LIST

ITEM	PART NO.	TITLE	QTY
1	500-120A/B	PLATE, CONTOUR ROLLER, W/SWIVEL	1
2	500-120E.1	ROLLER, CONTOUR	3
3	500-120G	DOWEL PIN, CONTOUR ROLLER ASSEMBLY, 3/16" OD X 5/8" LONG, SS	6
		BEARING, CONTOUR ROLLER, .500" OD X .187" ID X .196" WIDE,	
4	500-120H	DOUBLE SEALED	6
5	500-120T	PLATE, ROLLER BLOCK, TRIPLE	2
6	STOCK	SCREW, M4 X .7 X 20mm LONG, SOCKET HEAD CAP, SS	4